

Pintos Project

Sejun Kwon (sejun000@csl.skku.edu)
Computer Systems Laboratory

Pintos?

- ▶ Simple OS framework for x86 architecture
- ▶ Purpose of education
- ▶ Running on the system simulator (Bochs / QEMU)
- ▶ **These projects are hard**



Pintos Project

- ▶ **Project 0 (9/15~9/21)**
 - ▶ Test
- ▶ **Project 1 (9/22~10/12)**
 - ▶ Alarm / Priority scheduling (9/22~9/28)
 - ▶ Lock donation / BSD scheduling (9/29~10/13)
- ▶ **Project 2 (10/13~11/10)**
 - ▶ User program / System Call
- ▶ **Project 3 (11/10~12/7)**
 - ▶ Lazy Loading / Stack growing (11/10~11/23)
 - ▶ Page Replacement (11/24~12/7)



Pintos Test

- ▶ Project score will be graded by pintos test script

```
gcc -m32 -c ../../tests/userprog/sc-boundary.c -o tests/userprog/sc-boundary.o -g -msoft-
ing-prototypes -Wsystem-headers -MMD -MF tests/userprog/sc-boundary.d
gcc -m32 -c ../../tests/userprog/boundary.c -o tests/userprog/boundary.o -g -msoft-float
ototypes -Wsystem-headers -MMD -MF tests/userprog/boundary.d
gcc -m32 -Wl,--build-id=none -nostdlib -static -Wl,-T,../../lib/user/user.lds tests/user
oundary
pintos -v -k -T 60 --qemu --filesystem-size=2 -p tests/userprog/sc-boundary -a sc-boundary
perl -I../../ ../../tests/userprog/sc-boundary.ck tests/userprog/sc-boundary tests/userpro
pass tests/userprog/sc-boundary
gcc -m32 -c ../../tests/userprog/sc-boundary-2.c -o tests/userprog/sc-boundary-2.o -g -ms
missing-prototypes -Wsystem-headers -MMD -MF tests/userprog/sc-boundary-2.d
gcc -m32 -Wl,--build-id=none -nostdlib -static -Wl,-T,../../lib/user/user.lds tests/user
-boundary-2
pintos -v -k -T 60 --qemu --filesystem-size=2 -p tests/userprog/sc-boundary-2 -a sc-boundar
tput
perl -I../../ ../../tests/userprog/sc-boundary-2.ck tests/userprog/sc-boundary-2 tests/use
pass tests/userprog/sc-boundary-2
gcc -m32 -c ../../tests/userprog/halt.c -o tests/userprog/halt.o -g -msoft-float -O -fno-
-Wsystem-headers -MMD -MF tests/userprog/halt.d
gcc -m32 -Wl,--build-id=none -nostdlib -static -Wl,-T,../../lib/user/user.lds tests/user
pintos -v -k -T 60 --qemu --filesystem-size=2 -p tests/userprog/halt -a halt -- -q -f run
perl -I../../ ../../tests/userprog/halt.ck tests/userprog/halt tests/userprog/halt.result
pass tests/userprog/halt
```



What you need

- ▶ **C language skill**
 - ▶ **Skilled at understanding C code**
 - ▶ Pointer / Casting
 - ▶ Linked list
 - ▶ Experience
- ▶ **Tool**
 - ▶ Vim, Cscope
 - ▶ Eclipse
- ▶ **Time**
- ▶ **Patience**

